

WHAT IS CLAIMED IS:

1. A network device, comprising:
 - an incoming power port;
 - an outgoing power port;
 - 5 a internal circuit; and
 - A power storage system connected to the incoming power port, the outgoing power port and the internal circuit.
2. The network device of claim 1, the network device comprising a power regenerator between the power storage system and the outgoing power port.
- 10 3. The network device of claim 1, the network device comprising a power detection and divider circuit between the incoming power port and the power storage system.
4. The network device of claim 1, the power storage system to:
 - receive power from the incoming power port;
 - 15 power the internal circuit; and
 - provide power at a predetermined level to the outgoing power port.
5. The network device of claim 2, the power regenerator to provide power at the predetermined level to the outgoing power port and the internal circuit from the power storage system.
- 20 6. The network device of claim 3, the power detection and divider circuit to:
 - monitor the power needed at the outgoing power port;
 - provide the power needed at the outgoing power port;
 - charge the power storage system, as possible; and
 - power the internal circuit from the incoming power port in combination with
 - 25 the power storage system, as needed.
7. A network device, comprising:

- an incoming power port;
an outgoing power port;
an internal circuit; and
a power splitter to divide power from the incoming power port, provide power
5 to the outgoing power port and to power the internal circuit.
8. The network device of claim 7, the power splitter to provide power to the outgoing
power at a first level substantially equal to the power from the incoming power
port and to power the internal circuit at a second level substantially equal to the
first level.
- 10 9. The network device of claim 7, the power splitter to provide power to the outgoing
power port at a level substantially equal to 7.5 Watts, and to provide power to the
internal circuit at a level substantially equal to 7.5 Watts.
10. A method of providing power to a network device, the method comprising:
receiving power at an power storage system;
15 providing power at a predetermined level to an outgoing power port; and
providing power to an internal circuit, wherein the power provided to the
internal circuit is comprised of any excess power received at the power storage
system and power stored in the power storage system.
11. A method of providing power to a network device, the method comprising:
20 determining a first power level to be provided to an outgoing power port;
providing any excess power to the first power level to a internal circuit at a
second power level; and
storing any excess power to the second power level.
12. The method of claim 10, providing any excess power to the first power level
25 comprising providing no excess power to the first power level and providing
power to the second power level from an power storage system.

13. The method of claim 10, providing any excess power to the first power level comprising providing excess power substantially equal to the second power level.
14. The method of claim 10, storing any excess power comprising storing no excess power.
- 5 15. The method of claim 10, storing any excess power comprising storing excess power at a third power level.
16. A method of providing power to a network device, the method comprising:
- receiving power at a first level at a power splitter;
- providing power at a second level to an outgoing power port; and
- 10 powering an internal circuit at a third level.
17. The method of claim 16, providing power at a second level further comprising providing power at a second level wherein the second level is substantially equal to half the first level.
18. The method of claim 16, powering an internal circuit at a third level further
- 15 comprises powering an internal circuit at a third level substantially equal to the second power level.